

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

A. SCHULMAN, INC.,)	
)	
Plaintiff and Counterclaim-Defendant,)	Case No. 1:15-cv-1760
)	
vs.)	Judge Patricia A. Gaughan
)	
POLYONE CORPORATION, and)	
POLYONE DESIGNED STRUCTURES)	Jury Trial Demanded
& SOLUTIONS LLC,)	
)	
<u>Defendants and Counterclaim-Plaintiffs.</u>)	

REPLY OF A. SCHULMAN, INC. TO COUNTERCLAIMS OF POLYONE CORPORATION AND POLYONE DESIGNED STRUCTURES & SOLUTIONS LLC

Pursuant to F. R. Civ. P. 12(a)(1)(B), Plaintiff and Counterclaim-Defendant, A. Schulman, Inc. ("ASI"), files its Reply to Counterclaims served on January 9, 2017 by Defendants and Counterclaim-Plaintiffs PolyOne Corporation ("PolyOne") and PolyOne Designed Structures & Solutions LLC ("DSS").

ANSWER TO GENERAL ALLEGATIONS

Defendants PolyOne Corporation and PolyOne Designed Structures and Solutions LLC (collectively referred to as "PolyOne") incorporate by reference its answers to Paragraphs 1 through 46 of the Second Amended Complaint and Paragraphs 47-60 of its Affirmative Defenses above and for its counterclaims against A. Schulman, Inc., state as follows:

ASI RESPONSE: ASI reasserts the allegations of paragraphs 1 through 46 of its Second Amended Complaint, and denies paragraphs 47-60 of Defendants' Affirmative Defenses, which require no response. Specifically, Defendants' First and Second Affirmative Defenses alleging non-infringement are not affirmative defenses and require no response. ASI denies Defendants' Third through Sixth Affirmative Defenses, which

do not require a response, solely for the purpose of providing a complete response to Defendants' counterclaims below.

61. Counter-Plaintiff PolyOne Corporation is a corporation organized and existing under the laws of the state of Ohio with a place of business at 33587 Walker Road, Avon Lake, Ohio.

ASI RESPONSE: Admitted.

62. Counter-Plaintiff PolyOne Designed Structures and Solutions LLC is a limited liability company organized and existing under the state of Delaware and is a wholly-owned subsidiary of Counter-Plaintiff PolyOne Corporation. DSS has a place of business at 11650 Lakeside Crossing Court, Maryland Heights, Missouri 63146.

ASI RESPONSE: Admitted.

63. PolyOne Corporation ("PolyOne") was formed in 2000 as a consolidation of The Geon Company and M.A. Hanna Company. Geon's roots go back to 1927 when BF Goodrich scientist Waldo Semon produced the first usable vinyl polymer. In 1948, BF Goodrich created a plastic division that was subsequently spun off through a public offering in 1993, creating Geon. Hanna formed in 1885 and purchased its first polymer company in 1986. PolyOne is a premier provider of specialized polymer materials, services and solutions with operations in specialty polymer formulations, color and additive systems, plastic sheet and packaging solutions, and polymer distribution. PolyOne Corporation is headquartered in Avon Lake, Ohio, and has approximately 6900 employees in sales, manufacturing and distribution facilities in North America, South America, Europe, Asia, and Africa.

ASI RESPONSE: ASI admits that PolyOne markets polymer materials, and plastic sheets, and that PolyOne is located in Avon Lake, Ohio. ASI is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 63 of PolyOne's counterclaims and thus denies those allegations.

64. PolyOne Designed Structures and Solutions LLC is a wholly owned subsidiary of PolyOne Corporation, and it was formed upon the purchase by PolyOne Corporation of the stock of Spartech Corporation in March 2013.

ASI RESPONSE: ASI admits that PolyOne Designed Structures and Solutions LLC is a wholly owned subsidiary of PolyOne Corporation, but is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 64 of PolyOne's counterclaims and thus denies those allegations.

65. With roots going back to 1960, Spartech was a leading manufacturer of extruded plastic sheet, color concentrates and specialty plastic materials, and plastic packaging solutions. Spartech was the largest extruder of custom thermoplastic sheet and rollstock in North America with its products utilized in a variety of end markets, including automotive and recreational vehicle components. Spartech was actively involved in the development of new products, which included engineered sheets using multiple layers of materials, often of different plastics and often using proprietary mixtures of plastic compounds. Such products offered end-product manufactures a variety of solutions for high performance, such as light weight, weatherable, formable/shapeable, high gloss/non-painted, and durable plastics. As of 2005, Spartech's Custom Sheet and Rollstock segment operated twenty-two manufacturing facilities in North America and one in Europe. At these facilities, Spartech extruded a variety of plastic resins, including polyolefins, and produced extruded plastic sheet and rollstock of up to seven layers using multi-extrusion processes.

ASI RESPONSE: ASI admits that Spartech manufactured extruded plastic sheet and plastic resins, and that Spartech had multiple facilities in North America. ASI is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 65 of PolyOne's counterclaims and thus denies those allegations.

66. The Formalloy HG brand of coextruded polyolefin sheet, suitable for use in many vehicle exterior and interior thermoformed parts, was introduced in 1998 and consists of a glossy polyolefin cap layer over a thermoplastic polyolefin base.

ASI RESPONSE: ASI admits that Formalloy HG brand products have been advertised and sold. ASI is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 66 of PolyOne's counterclaims and thus denies those allegations.

67. Coextruded polyolefin sheet later sold under the Extreme HG brand was first commercialized in 2006 and also consists of a glossy polyolefin cap layer over a thermoplastic polyolefin base.

ASI RESPONSE: ASI admits that Extreme HG brand products were advertised and sold, but is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 67 of PolyOne's counterclaims and thus denies those allegations.

68. Some variants of the Formalloy HG and Extreme HG products manufactured and sold prior to May 5, 2007 also included one or more other coextruded polyolefin layers between the cap layer and the base layer.

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 68 of PolyOne's counterclaims and thus denies those allegations.

69. Counter-Defendant A. Schulman, Inc. ("ASI") is a corporation organized and existing under the laws of the state of Delaware, with a place of business at 3637 Ridgewood Road, Fairlawn, Ohio.

ASI RESPONSE: Admitted.

70. U.S. Patent No. 8,007,902 (the '902 Patent) issued on August 30, 2011 from U.S. application No. 12/548,946, which was filed on August 27, 2009 as a continuation application of PCT/US09/42704, which in turn was filed on May 4, 2009, and claims priority to U.S. provisional application No. 61/050,465, which was filed on May 5, 2008. U.S. Patent No. 8,182,906 (the '906 Patent) issued on May 22, 2012 as a continuation of U.S. application No. 12/548,946 and also claims priority to PCT/US09/42704 and U.S. provisional application No. 61/050,465. Dennis Smith is listed as the inventor on the '902 and '906 patents.

ASI RESPONSE: ASI admits that U.S. Patent No. 8,007,902 (the '902 Patent) issued on August 30, 2011 from U.S. application No. 12/548,946, which was filed on August 27, 2009 as a continuation application of PCT/US09/42704, which in turn was filed on May 4, 2009, and claims priority to U.S. provisional application No. 61/050,465, which was filed on May 5, 2008. ASI admits that U.S. Patent No. 8,182,906 (the '906 Patent) issued on May 22, 2012 as a continuation of U.S. application No. 12/548,946, and also claims priority to PCT/US09/42704 and U.S. provisional application No. 61/050,465.

ASI admits that Dennis Smith is listed as the inventor on the '902 and '906 patents.

71. Both the '902 patent and the '906 patent have undergone *ex parte* reexaminations in the USPTO at the request of PolyOne Designed Structures and Solutions LLC. Claims 1-28 and 36-39 of the '902 patent were reexamined; and claims 1-81 of the '906 patent were reexamined. These reexaminations have terminated, and Reexamination Certificates have been issued on April 7, 2016 and April 4, 2016, for the '902 and '906 patents, respectively.

ASI RESPONSE: Admit that both the '902 patent and the '906 patent have undergone ex parte reexaminations in the USPTO at the request of PolyOne Designed Structures and Solutions LLC. Claims 1-28 and 36-39 of the '902 patent were reexamined; and claims 1-81 of the '906 patent were reexamined. These reexaminations have terminated, the USPTO confirmed that all challenged claims are patentable, and Reexamination Certificates have been issued on April 4, 2016.

72. In each reexamination, the USPTO did not consider the best prior art submitted when making its initial rejections of the claims. In addition, because of the law regarding reexaminations, certain prior art, including prior sales by Spartech Corporation, could not be considered by the USPTO. Similarly, in the reexamination proceedings, the USPTO could not consider other invalidity issues involving 35 U.S.C. § 112 and relating to the '902 and '906 patents' failure to describe and enable claim limitations relating to DOI, gravelometer, and random microstructure, as set forth below.

ASI RESPONSE: ASI denies that the USPTO did not consider "the best prior art submitted" when making its initial rejections of the claims. ASI admits that the USPTO may consider only patents and printed publications in reexaminations, pursuant to 35 U.S.C. §§ 301(a)(1) and 302. ASI denies that there were any invalidity issues under 35 U.S.C. § 112 relating to the '902 and '906 patents but admits that the USPTO may institute reexaminations under 35 U.S.C. §§ 301 and 302 based solely on prior art consisting of patents or printed publications. ASI is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 72 of PolyOne's counterclaims and thus denies those allegations.

**ASI'S REPLY TO
COUNT I - DECLARATORY JUDGEMENT OF NON-INFRINGEMENT OF U.S.
PATENT NO. 8,007,902**

73. Counter-Plaintiff PolyOne hereby incorporates by reference its answers to Paragraphs 1 through 46 of the Second Amended Complaint, Paragraphs 47 through 60 of its Affirmative Defenses, and Paragraphs 61 through 72, above, and its answers to Paragraphs 1 through 57, as if fully set forth herein.

ASI RESPONSE: ASI incorporates its Answers to paragraphs 61-72, above, and the allegations in its Amended Complaint. Although no response is required to Defendants' Affirmative Defenses, for the sake of completeness, ASI denies each of Defendants' Affirmative Defenses.

74. This is an action arising under the patent laws of the United States. This Court has subject matter jurisdiction over this counterclaim in that it is one for declaratory relief under 28 U.S.C. §§ 2201, and the patent laws of the United States which arises from an actual and justiciable controversy between Plaintiff ASI and Defendant PolyOne, as to alleged infringement of U.S. Patent No. 8,007,902, referred to herein as the '902 patent.

ASI RESPONSE: Admitted.

75. Counter-Defendant ASI has charged, by this action, that Counter-Plaintiff PolyOne has infringed the '902 patent.

ASI RESPONSE: Admitted.

76. This Court has personal jurisdiction over Counter-Defendant ASI, which resides in this District.

ASI RESPONSE: Admitted.

77. Venue is proper in this District under 28 U.S.C. §§ 1391(c) and 1400(b).

ASI RESPONSE: Admitted.

78. An actual controversy exists between Counter-Plaintiff PolyOne and Counter-Defendant ASI within the jurisdiction of this Court and which this Court should resolve; Counter-Plaintiff PolyOne seeks the declaration of the rights of the parties under the provisions of Section 2201 of Title 28, United States Code.

ASI RESPONSE: Admitted.

79. Counter-Plaintiff PolyOne has not infringed, and is not now infringing any claim of U.S. Patent No. 8,007,902. PolyOne does not sell and has not sold any products that meet all of the limitations of any valid claims of the '902 patent.

ASI RESPONSE: Denied.

80. On May 23, 2016, Counter-Plaintiff PolyOne served its initial non-infringement contentions which demonstrate PolyOne's non-infringement of the '902 patent and which are hereby incorporated by reference.

ASI RESPONSE: ASI denies that Defendants' initial non-infringement contentions demonstrate non-infringement of the '902 patent, in view of the results of ASI's testing of samples produced by Defendants, which testing establishes that certain products made by Defendants infringe the asserted claims of the '902 patent.

**ASI'S REPLY TO
COUNT II - DECLARATORY JUDGEMENT OF NON-INFRINGEMENT OF U.S.
PATENT NO. 8,182,906**

81. Counter-Plaintiff PolyOne hereby incorporates by reference its answers to Paragraphs 1 through 46 of the Second Amended Complaint, Paragraphs 47 through 60 of its Affirmative Defenses, and Paragraphs 61 through 80, above, and its answers to Paragraphs 1 through 57, as if fully set forth herein.

ASI RESPONSE: ASI incorporates its Answers to paragraphs 61-80, above, and the allegations in its Amended Complaint. Although no response is required to Defendants' Affirmative Defenses, for the sake of completeness, ASI denies each of Defendants' Affirmative Defenses.

82. This is an action arising under the patent laws of the United States. This Court has subject matter jurisdiction over this counterclaim in that it is one for declaratory relief under 28 U.S.C. §§ 2201, and the patent laws of the United States which arises from an actual and justiciable controversy between Plaintiff ASI and Defendant PolyOne, as to alleged infringement of U.S. Patent No. 8,182,906, referred to herein as the '906 patent.

ASI RESPONSE: Admitted.

83. Counter-Defendant ASI has charged, by this action, that Counter-Plaintiff PolyOne has infringed the '906 patent.

ASI RESPONSE: Admitted.

84. Counter-Plaintiff PolyOne has not infringed, and is not now infringing any claim of U.S. Patent No. 8,182,906. PolyOne does not sell and has not sold any products that meet all of the limitations of any valid claims of the '906 patent.

ASI RESPONSE: Denied.

85. On May 23, 2016, Counter-Plaintiff PolyOne served its initial non-infringement contentions which demonstrate PolyOne's non-infringement of the '902 patent and which are hereby incorporated by reference.

ASI RESPONSE: ASI denies that Defendants' initial non-infringement contentions demonstrate non-infringement of the '906 patent, in view of the results of ASI's testing of samples produced by Defendants, which testing establishes that certain products made by Defendants infringe the asserted claims of the '906 patent.

**ASI'S REPLY TO
COUNT III - DECLARATORY JUDGEMENT OF INVALIDITY OF U.S. PATENT NO.
8,007,902**

86. Counter-Plaintiff PolyOne hereby incorporates by reference its answers to Paragraphs 1 through 46 of the Second Amended Complaint, Paragraphs 47 through 60 of its Affirmative Defenses, and Paragraphs 61 through 85 above, as if fully set forth herein.

ASI RESPONSE: ASI incorporates its Answers to paragraphs 61-85, above, and the allegations in its Amended Complaint. Although no response is required to Defendants' Affirmative Defenses, for the sake of completeness, ASI denies each of Defendants' Affirmative Defenses.

87. Each claim in U.S. Patent No. 8,007,902 is invalid for failure to comply with the patentability requirements of Title 35 United States Code (e.g., one or more of 35 U.S.C. §101, §102, §103, and/or §112), examples of which are set forth below.

ASI RESPONSE: Denied.

88. Each claim in the '902 patent is invalid under 35 U.S.C. § 102(b) due to prior sale, in this country, of the accused products Extreme HG and Formalloy HG more than a year before the earliest effective filing date of the '902 patent, May 5, 2008.

ASI RESPONSE: Denied.

89. PolyOne has confidential manufacturing and sales information showing that since more than a year prior to May 5, 2008, the accused Formalloy HG product has been and currently is a multilayered sheet material comprising a polyolefin cap layer over a polyolefin base layer, with one or more optional polyolefin layers between the cap and base layers, formed by coextrusion of the polyolefin layers without use of an adhesive between the layers.

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the content of the “confidential manufacturing and sales information” referred to in paragraph 89 of PolyOne’s counterclaims, and thus denies the allegations in paragraph 90. Spartech Corporation publically announced the introduction Formalloy HG high gloss TPO product line in August of 1998.

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the truth of the allegations in paragraph 90 of PolyOne’s counterclaims and thus denies those allegations.

91. A 1999 article by Jan H. Schut, "Sheet Extrusion Competition Ups the Ante on Technological Sophistication", *Plastics Technology*, Feb. 1999, p. 40-43, February 1999 ("Schut"), described Spartech's Formalloy HG product as "a 0.125-0.300 in. substrate of colored TPO capped with 0.020-0.030 in. of clear, glossy PP. The gloss layer and TPO were developed for Spartech by UVTec Inc. The company uses clarifying agents to keep crystals in the PP layer very small."

ASI RESPONSE: ASI admits that *Plastics Technology* publication dated February 1999 is available from the University of Chicago Science Library, and that such publication includes an article by Jan H. Schut, entitled, “Sheet Extrusion Competition Ups the Ante on Technological Sophistication” and that the article in part characterizes “Spartech’s new Formalloy HG,” apparently based on a description given by Spartech’s marketing director Greg Nagel. ASI otherwise denies the allegations of paragraph 91.

92. PolyOne has confidential manufacturing and sales information showing that since more than a year prior to May 5, 2008, the accused Extreme HG product has been and currently is a multilayered sheet material comprising a polyolefin cap layer over a polyolefin base layer, with one or more optional polyolefin layers between the cap and base layers, formed by coextrusion of the polyolefin layers without use of an adhesive between the layers.

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the content of the “confidential manufacturing and sales information” referred to in paragraph 92 of PolyOne’s counterclaims, and thus denies the allegations in paragraph 92.

93. The May 2008 issue of the magazine *Plastics Technology* reported on Spartech's Extreme HG product line: " New thermoformable TPO sheet from Spartech Corp., Clayton, Mo., reportedly offers improved processability for RV, bus, truck, and marine applications. "Extreme" sheet products comprise three grades that provide a wider processing window, better sag control, and enhanced aesthetics, Spartech says ... Extreme HG provides high gloss (85%) and excellent depth of image in a range of colors ... Among the first commercial applications are 8 × 10 ft RV exterior panels. Widths up to 120 in. and thicknesses from 60 to 325 mils are available."

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the truth of the allegations in paragraph 93 of PolyOne's counterclaims and thus denies those allegations.

94. In this litigation, PolyOne has identified and produced sales records demonstrating that the accused products Extreme HG and Formalloy HG had been offered for sale and sold more than a year before the earliest effective filing date of the '902 patent, May 5, 2008.

ASI RESPONSE: ASI denies that PolyOne has identified and produced sales records that accused products meeting the limitation of the claims have been offered for sale and sold more than a year before the earliest effective filing date of the '902 patent, May 5, 2008.

95. Each claim in the '902 patent is invalid under 35 U.S.C. § 102(b) as being anticipated by the prior art. For example, several prior art references asserted in the reexamination petitions in the reexaminations of the '902 and '906 patents, which were not specifically relied upon by the reexamination Examiners, teach multilayered coextruded polyolefin sheet materials and formed products having substantially the same structure as claimed in the '902 patent.

ASI RESPONSE: Denied.

96. Each claim in the '902 patent is invalid under 35 U.S.C. § 103(a) as being obvious over the prior art. For example, several prior art references asserted in the reexamination petitions in the reexaminations of the '902 and '906 patents, which were not specifically relied upon by the reexamination Examiners, and which when combined with the knowledge of persons of ordinary skill in the art or other references in the field of the alleged invention, teach or suggest substantially the same multilayered coextruded polyolefin sheet materials and formed products as claimed in the '902 patent.

ASI RESPONSE: Denied.

97. Each asserted claim in the '902 patent fails to particularly point out and distinctly claim the subject matter which is regarded as the invention, and thus fails to comply with the second paragraph of 35 U.S.C. § 112, as set forth in Paragraphs 102 through 108, below.

ASI RESPONSE: Denied.

98. Each asserted claim of the '902 patent requires that the claimed multilayer material, or the claimed formed products, as the case may be, must exhibit a DOI of 70 or greater.

ASI RESPONSE: ASI admits that each asserted claim of the '902 patent requires, inter alia, that the structure or formed product "has a DOI of 70 or greater," but otherwise denies the characterization of the patent claims of the '902 patent in paragraph 98.

99. There are multiple known methods and test protocols for measuring DOI. Some DOI methods involve subjective visual comparison of an image reflected from a test surface to a standard set of images that represent different DOI levels. Several other DOI methods use instrumentation that directly provide a numerical DOI value as the output.

ASI RESPONSE: ASI admits that there are multiple methods for measuring DOI but denies the remaining allegations of this paragraph.

100. The subjective and instrumental methods as referred to in Paragraph 103, above, would not necessarily provide the same results for a given test sample and application of each of these different methods can yield different results.

ASI RESPONSE: Denied.

101. Neither the claims nor the specification of the '902 patent identify or describe the specific method by which the DOI should be measured to satisfy this limitation of the asserted claims.

ASI RESPONSE: Denied.

102. Each asserted claims of the '902 patent requires that the backing layer has a "random microstructure."

ASI RESPONSE: ASI admits that each asserted claim of the '902 patent requires, inter alia, a "backing layer with a random microstructure," but otherwise denies the characterization of the patent claims of the '902 patent in paragraph 102.

103. Neither the specification nor the claims describe or enable the "random microstructure" limitation, which is not a term that is commonly or consistently used in the polymer and plastics art.

ASI RESPONSE: Denied.

104. ASI did not test for the "random microstructure" limitation in the alleged tests of PolyOne/Spartech's products described in the claim charts included in ASI's infringement claims, above.

ASI RESPONSE: ASI admits that ASI did not run a specific laboratory test for a "random microstructure," but otherwise denies the allegations in paragraph 104.

105. The specification of the '902 patent does not contain a written description of the invention and of the manner and process of making it and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art of science to which it pertains, or with which it is most nearly connected, to make construct, compound, or use the same, so as to distinguish it from other inventions, and thus fails to comply with the first paragraph of 35 U.S.C. §112, as set forth below.

ASI RESPONSE: Denied.

106. The specification of the '902 patent does not contain a written description of the factors required to obtain the DOI and gravelometer test property limitations of the claimed multilayer sheet materials, formed products and methods, sufficient to enable a person or ordinary skill in the art to make the claimed invention as required by the first paragraph of 35 U.S.C. §112.

ASI RESPONSE: Denied.

107. The specification of the '902 patent does not contain a written description of the gravelometer test limitation of the claims, in such full, clear, concise, and exact terms as to enable any person skilled in the art of science to which it pertains, or with which it is most nearly connected, to make construct, compound, or use the same, as set forth below.

ASI RESPONSE: Denied.

108. The asserted claims of the '902 patent require that the claimed multilayer sheet materials or claimed formed products, as the case may be, pass a modified GM9508P gravelometer test, which ASI defined as obtaining a rating of 7 or greater during the reexaminations of the '902 and '906 patents.

ASI RESPONSE: ASI admits that the asserted claims require the structure "passes a gravelometer impact test per the GM9508P standard, with a 10 pt load, at a - 30° C.

temperature, and at an angle of 30 degrees," and that the pass/fail criteria for such test is set forth in Table 2 of the patent specification as "7 or greater" with no cracking or

delamination. ASI denies the remaining allegations as inaccurate characterizations of the

claims of the '902 patent, and the reexamination prosecution histories of the '902 and '906 patents.

109. The asserted claims require using 10 times the amount of gravel specified in the GM9508P test protocol.

ASI RESPONSE: ASI admits that GM9508P describes using 473 mL of graded gravel. ASI admits that the claims require a "10 pt load." Otherwise, ASI denies the allegations in paragraph 109.

110. The specification does not teach how the modification referred to in Paragraph 113, above, should be implemented in the operation of the published GM9508P test.

ASI RESPONSE: ASI admits that the specification does not describe in *ipsis verbis* how to use a 10 pt load in GM9508P, but otherwise denies the allegations in paragraph 110.

111. The specification of the '902 patent does not describe how a gravel-damaged plastic sheet or plastic formed product, which may have the same color all the way through the material, is to be compared to the photographs of chipped painted surfaces supplied with the test protocol to reliably and consistently determine if a given material passes the GM9508P test. Thus, a person of ordinary skill in the art would not be able to objectively determine what rating a given test sample should be assigned. Consequently, the specification does not meet the written description and enablement requirements of 35 U.S.C. §112.

ASI RESPONSE: Denied.

112. On July 19, 2016, Counter-Plaintiff PolyOne served its initial invalidity contentions demonstrating that the '902 patent is invalid and which are hereby incorporated by reference.

ASI RESPONSE: Admit that PolyOne served initial invalidity contentions, but deny that they demonstrate that the '902 patent is invalid.

113. On November 28, 2016, Counter-Plaintiff PolyOne served its supplemental initial invalidity contentions demonstrating that the '902 patent is invalid and which are hereby incorporated by reference.

ASI RESPONSE: Admit that PolyOne served supplemental initial invalidity contentions but deny that they demonstrate that the '902 patent is invalid.

COUNT IV- DECLARATORY JUDGEMENT OF INVALIDITY OF U.S. PATENT NO. 8,182,906

114. Counter-Plaintiff PolyOne hereby incorporates by reference its answers to Paragraphs 1 through 46 of the Second Amended Complaint, Paragraphs 47 through 60 of its Affirmative Defenses, and Paragraphs 61 through 113 above, as if fully set forth herein.

ASI RESPONSE: ASI incorporates its Answers to paragraphs 61-113, above, and the allegations in its Amended Complaint. Although no response is required to Defendants' Affirmative Defenses, for the sake of completeness, ASI denies each of Defendants' Affirmative Defenses..

115. Each claim in U.S. Patent No. 8,182,906 is invalid for failure to comply with the patentability requirements of Title 35 United States Code (e.g., one or more of 35 U.S.C. §101, §102, §103, and/or §112), examples of which are set forth in Paragraphs 118 through 137, below.

ASI RESPONSE: Denied.

116. Each claim in the '906 patent is invalid under 35 U.S.C. § 102(b) due to prior sale, in this country, of the accused products Extreme HG and Formalloy HG more than a year before the earliest effective filing date of the '906 patent, May 5, 2008, as set forth below.

ASI RESPONSE: Denied.

117. PolyOne has confidential manufacturing and sales information showing that since more than a year prior to May 5, 2008, the accused Formalloy HG product has been and currently is a multilayered sheet material comprising a polyolefin cap layer over a polyolefin base layer, with one or more optional polyolefin layers between the cap and base layers, formed by coextrusion of the polyolefin layers without use of an adhesive between the layers.

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the content of the "confidential manufacturing and sales information" referred to in paragraph 117 of PolyOne's counterclaims, and thus denies the allegations in paragraph 117.

118. Spartech Corporation publically announced the introduction Formalloy HG high gloss TPO product line in August of 1998.

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the truth of the remainder of the allegations in paragraph 118 of PolyOne's counterclaims and thus denies those allegations.

119. A 1999 article by Jan H. Schut, "Sheet Extrusion Competition Ups the Ante on Technological Sophistication", *Plastics Technology*, Feb. 1999, p. 40-43, February 1999 ("Schut"), described Spartech's Formalloy HG product as "a 0.125-0.300 in. substrate of colored TPO capped with 0.020-0.030 in. of clear, glossy PP. The gloss layer and TPO were developed for Spartech by UVTec Inc. The company uses clarifying agents to keep crystals in the PP layer very small."

ASI RESPONSE: ASI admits that *Plastics Technology* publication dated February 1999 is available from the University of Chicago Science Library, and that such publication includes an article by Jan H. Schut, entitled, "Sheet Extrusion Competition Ups the Ante on Technological Sophistication" and that the article in part characterizes "Spartech's new Formalloy HG," apparently based on a description given by Spartech's marketing director Greg Nagel. ASI otherwise denies the allegations of paragraph 119.

120. PolyOne has confidential manufacturing and sales information showing that since more than a year prior to May 5, 2008, the accused Extreme HG product has been and currently is a multilayered sheet material comprising a polyolefin cap layer over a polyolefin base layer, with one or more optional polyolefin layers between the cap and base layers, formed by coextrusion of the polyolefin layers without use of an adhesive between the layers.

ASI RESPONSE: ASI is without information sufficient to form a belief as to the allegations in this paragraph and therefore denies same.

121. The May 2008 issue of the magazine *Plastics Technology* reported on Spartech's Extreme HG product line: "New thermoformable TPO sheet from Spartech Corp., Clayton, Mo., reportedly offers improved processability for RV, bus, truck, and marine applications. "Extreme" sheet products comprise three grades that provide a wider processing window, better sag control, and enhanced aesthetics, Spartech says ... Extreme HG provides high gloss (85%) and excellent depth of image in a range of colors ... Among the first commercial applications are 8 × 10 ft RV exterior panels. Widths up to 120 in. and thicknesses from 60 to 325 mils are available."

ASI RESPONSE: ASI is without knowledge or information sufficient to form a belief as to the truth of the allegations in paragraph 121 of PolyOne's counterclaims and thus denies those allegations.

122. In this litigation, PolyOne has identified and produced sales records demonstrating that the accused products Extreme HG and Formalloy HG had been offered for sale and sold more than a year before the earliest effective filing date of the '906 patent, May 5, 2008.

ASI RESPONSE: ASI denies that PolyOne has identified and produced sales records that accused products meeting the limitation of the claims have been offered for sale more than a year prior to May 5, 2008, and thus denies the allegations of this paragraph.

123. Each claim in the '906 patent is invalid under 35 U.S.C. § 102(b) as being anticipated by the prior art. For example, several prior art references asserted in the reexamination petitions in the reexaminations of the '902 and '906 patents, which were not specifically relied upon by the reexamination Examiners, teach multilayered coextruded polyolefin sheet materials and formed products having substantially the same structure as claimed in the '906 patent.

ASI RESPONSE: Denied.

124. Each claim in the '906 patent is invalid under 35 U.S.C. § 103(a) as being obvious over the prior art. For example, several prior art references asserted in the reexamination petitions in the reexaminations of the '902 and '906 patents, which were not specifically relied upon by the reexamination Examiners, and which when combined with the knowledge of persons of ordinary skill in the art or other references in the field of the alleged invention, teach or suggest substantially the same multilayered coextruded polyolefin sheet materials and formed products as claimed in the '902 patent.

ASI RESPONSE: Denied.

125. Each asserted claim in the '906 patent fails to particularly point out and distinctly claim the subject matter which is regarded as the invention, and thus fails to comply with the second paragraph of 35 U.S.C. §112, as set forth in Paragraphs 127 through 130, below.

ASI RESPONSE: Denied.

126. Each asserted claim of the '906 patent requires that the claimed multilayer material, or the claimed formed products, as the case may be, must exhibit a DOI of 70 or greater.

ASI RESPONSE: ASI admits that each asserted claim of the '902 patent requires, inter alia, that the structure or formed product “has a DOI of 70 or greater,” but otherwise denies the characterization of the patent claims of the '906 patent in paragraph 126.

127. There are multiple known methods and test protocols for measuring DOI. Some DOI methods involve subjective visual comparison of an image reflected from a test surface to a standard set of images that represent different DOI levels. Several other DOI methods use instrumentation that directly provide a numerical DOI value as the output.

ASI RESPONSE: ASI admits that there are multiple methods for measuring DOI but denies the remaining allegations of this paragraph.

128. The subjective and instrumental methods as referred to above, would not necessarily provide the same results for a given test sample. Application of each of these different methods can yield different results.

ASI RESPONSE: Denied.

129. Neither the claims nor the specification of the '906 patent identify or describe the specific method by which the DOI should be measured to satisfy this limitation of the asserted claims.

ASI RESPONSE: Denied.

130. The specification of the '906 patent does not contain a written description of the invention and of the manner and process of making it and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art of science to which it pertains, or with which it is most nearly connected, to make construct, compound, or use the same, so as to distinguish it from other inventions, and thus fails to comply with the first paragraph of 35 U.S.C. §112, as set forth below.

ASI RESPONSE: Denied.

130 (sic). The specification of the '906 patent does not contain a written description of the factors required to obtain the DOI and gravelometer test property limitations of the claimed multilayer sheet materials, formed products and methods, sufficient to enable a person or ordinary skill in the art to make the claimed invention as required by the first paragraph of 35 U.S.C. §112.

ASI RESPONSE: Denied.

131. The specification of the '906 patent does not contain a written description of the gravelometer test limitations of the claims, in such full, clear, concise, and exact terms as to enable any person skilled in the art of science to which it pertains, or with which it is most nearly connected, to make construct, compound, or use the same, as set forth below.

ASI RESPONSE: Denied.

132. The asserted claims of the '906 patent require that the claimed multilayer sheet materials or claimed formed products, as the case may be, pass a modified GM9508P gravelometer test, which ASI defined as obtaining a rating of 7 or greater during the reexaminations of the '902 and '906 patents.

ASI RESPONSE: ASI admits that the asserted claims require the structure “passes a gravelometer impact test per the GM9508P standard, with a 10 pt load, at a - 30° C.

temperature, and at an angle of 30 degrees,” and that the pass/fail criteria for such test is set forth in Table 2 of the patent specification as “7 or greater” with no cracking or delamination. ASI denies the remaining allegations as inaccurate characterizations of the claims of the '906 patent and the reexamination prosecution histories of the '902 and '906 patents.

133. The asserted claims require using 10 times the amount of gravel specified in the GM9508P test protocol.

ASI RESPONSE: ASI admits that GM9508P describes using 473 mL of graded gravel. ASI admits that the asserted claims require a “10 pt load.” Otherwise, ASI denies the allegations in paragraph 133.

134. The specification does not teach how the modification referred to above should be implemented in the operation of the published GM9508P test.

ASI RESPONSE: ASI admits that the specification does not describe in *ipsis verbis* how to use a 10 pt load in GM9508P, but otherwise denies the allegations in paragraph 134.

135. The specification of the '906 patent does not describe how a gravel-damaged plastic sheet or plastic formed product, which may have the same color all the way through the material, is to be compared to the photographs of chipped painted surfaces supplied with the test protocol

to reliably and consistently determine if a given material passes the GM9508P test. Thus, a person of ordinary skill in the art would not be able to objectively determine what rating a given test sample should be assigned. Consequently, the specification does not meet the written description and enablement requirements of 35 U.S.C. §112.

ASI RESPONSE: Denied.

136. On July 19, 2016, Counter-Plaintiff PolyOne served its initial invalidity contentions demonstrating that the '906 patent is invalid and which are hereby incorporated by reference.

ASI RESPONSE: Admit that PolyOne served initial invalidity contentions, but deny that they demonstrate that the '906 patent is invalid.

137. On November 28, 2016, Counter-Plaintiff PolyOne served its supplemental initial invalidity contentions demonstrating that the '906 patent is invalid and which are hereby incorporated by reference.

ASI RESPONSE: Admit that PolyOne served supplemental invalidity contentions, but deny that they demonstrate that the '906 patent is invalid.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff ASI prays that this Court enter judgment that:

- A. PolyOne has directly infringed the '902 and '906 patents;
- B. The '902 and '906 patents are not invalid and enforceable;
- C. PolyOne be preliminarily and permanently enjoined from making, using, selling and offering to sell the infringing products in the United States prior to the expiration of the '902 and '906 patents;
- D. ASI be awarded damages adequate to compensate it for PolyOne's infringement of the '902 and '906 patents including lost profits, but in an amount no less than a reasonable royalty, and that such damages be trebled according to 35 U.S.C. § 284;
- E. This case is exceptional within the meaning of 35 U.S.C. § 285, and that all costs and expenses of this action, including reasonable attorneys' fees, be awarded to ASI; and

F. ASI be awarded such further relief as the Court may deem just, necessary, and/or proper.

Dated: January 23, 2017

/s/ Eric C. Cohen

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CERTIFICATE OF SERVICE

The undersigned certifies that on the 23rd day of January, 2017, a copy of the foregoing was filed with the Clerk of Court electronically. Notice of this filing will be sent to all registered parties by operation of the Court's CM/ECF system.

/s/Eric C. Cohen

Eric C. Cohen